

REMARKS

Claims 1-8 are pending in this application. By this Amendment, claims 1 and 8 are amended. No new matter is added. Support for amended claims 1 and 8 may be found in the originally filed disclosure, e.g., at page 4, line 8, line 19, and page 5, line 8. Claims 1 and 8 are the independent claims.

Favorable reconsideration of this application, in light of the preceding amendments and following remarks, is respectfully requested.

Claim Rejections - 35 U.S.C. § 112

Claims 1-8 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written requirement. Applicants respectfully traverse this rejection for the reasons discussed below.

Applicants submit that claims 1 and 8 have been amended to replace the term “embedded” to --blended--. Support for amended claims 1 and 8 may be found in the originally filed disclosure, e.g., at page 4, line 8, line 19, and page 5, line 8. Accordingly, Applicants submit that the subject matter as recited in amended claims 1 and 8 is adequately described by the originally filed disclosure.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claim Rejections - 35 U.S.C. § 103

Claims 1, 4 and 6-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,248,515 (“Gorman”) in view of U.S. Patent No. 6,079,243 (“Inoue”). Applicants respectfully traverse this rejection for the reasons discussed below.

In order establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), the U.S. Supreme Court in *KSR Int'l Co. v. Teleflex, Inc.*¹ noted that the rejection must establish a reasoning that it would have been obvious for one of ordinary skill in the art to have combined the teachings of the cited document(s). One way to establish this would be to show “some articulated reasoning with some rationale underpinning to support the legal conclusion of obviousness” and “identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.”² In addition, the cited document(s), when combined or modified, must teach or suggest all of the claim limitations of the rejected claims.³

Applicants respectfully submit that the proposed combination of references does not meet these criteria. In particular, the rejection fails to demonstrate that one of ordinary skill in the art would have combined the teachings of the Gorman and the Inoue references in the manner used to reject the claims.

For example, in the outstanding Office Action, the rejection is based on an assertion that:

[i]t would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the lubricating particles of Inoue to the inner plastic tubing layer of Gorman because it would reduce the feeding resistance between the wire surface and the guide tube during the welding operation.⁴

Applicants respectfully submits, however, that if the proposed modification or combination of the prior art would change the *principle of operation* of the prior art invention being modified, then the teachings of the references are not sufficient to

¹ 550 U.S. at 398, 82 USPQ2d at 1396 (2007).

² *Id.*

³ *In re Vaeck*, 947, F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

⁴ See Office Action mailed January 13, 2009, page 3, paragraph 1a.

render the claims *prima facie* obvious.⁵ Applicants respectfully submits that the proposed combination of the Gorman and the Inoue references would require a substantial reconstruction and redesign as well as a change in the *basic principle* under which the Inoue reference construction was designed to operate. That is, the Gorman reference discloses a lead wire made of plastic tube covered with metal laminated plastics, in which TEFLON, nylon or other low friction materials are used to make the conduit. The Inoue reference teaches a method for making a metal welding wire having particulate lubricants embedded in the surface of the wire. The method of Inoue makes use of metal wire manufacturing processes and is totally unsuitable for manufacturing any kind of plastic material.

Accordingly, if one skilled in the art would combine the Inoue reference with the Gorman reference, one would appreciate that a particulate lubricating material would not have the same effect on a surface of the guide tube as on a surface of a welding wire. There is no teaching in the Inoue reference that would suggest the proposed modification and/or combination. Second, one skilled in the art would appreciate that embedding plastic material would not give the same or similar results as embedding metal with hard particulate lubricating material. Therefore, since plastics and metals are definitely considered different kind of materials, there would be no expectation of success in combining Gorman with Inoue. For these reasons, it is respectfully submitted that the teachings of Inoue *teach away* from the combination rather than making it obvious.

In addition, Applicants respectfully submit that “the mere fact that references can be combined or modified does not render the resultant combination obvious

⁵ *In re Ratti*, 270 F.2d 810, 23 USPQ 349 (CCPA 1959).

unless the prior art also suggest the desirability of the combination.”⁶ That is, even if one would be drawn to try to use particulate lubricating material on the inner layer of a wire guide tube in the manner asserted by the Examiner, one would not be lead to produce the claimed invention on basis of the proposed combination of Gorman and Inoue. In particular, as discussed above, the Gorman reference discloses nothing about manufacturing plastic tubes and the Inoue reference discloses only a method for producing lubricated metal wire. Therefore, a person skilled in the art would first, in order to arrive at the claimed invention, transfer the lubricating particle layer from the surface of the metal wire to the surface of the plastic guide tube, expecting similar results despite the different materials and structure, and then solve the problem of producing such a structure without any relevant teachings available from the cited references. The rejection, therefore, fails to articulate a proper rationale to support an obviousness rejection.

Further, even if, *arguendo*, the teachings of the Gorman and the Inoue references were to be combined, they would nonetheless fail to teach each and every element of the rejected claims. In particular, Applicants respectfully submit that the Gorman and the Inoue references, whether alone or in combination, fail to teach or suggest, *inter alia*, “an inner layer region blended with a particulate additive of at least polytetrafluoroethylene (PTFE) and an outer layer region being not blended with the additive.

Instead, the Inoue reference discloses a method of manufacturing welding wires by drawing raw wires through a dry hole die to obtain dry hole-drawn wires, wherein powder lubricants, e.g., MoS₂ and WS₂, are applied to the raw wires during the drawing of the wires through the dry hole die; and coating the wet hole-drawn wires

⁶ *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

with lubricating oil to obtain welding wires. (see col. 10, lines 38-48, and claim 1 of the Inoue reference). In other words, the Inoue reference merely discloses applying powder lubricants on the surface of the hole die, rather than blending the inner layer region with the particulate additive of at least polytetrafluoroethylene (PTFE). Such a powder lubricant would stay on the surface, and no “alloyed” inner composite layer can be formed. In addition, using a lubricant applied to a surface, either the tube or the wire, does not change the properties of the lead tube in any way. In fact, using a lubricant does not operate in the same manner as mixing an additive to a matrix material in order to form a composite material or structure.

Accordingly, Applicants respectfully submit that the Gorman and the Inoue references, individually or in combination, fail to disclose, or even suggest, “an inner layer region blended with a particulate additive of at least polytetrafluoroethylene (PTFE) and an outer layer region being not blended with the additive,” as recited in amended claim 1.

Since the rejection fails to disclose or suggest each and every element of the rejected claims, Applicants respectfully submit that no *prima facie* case of obviousness has been established with respect to claim 1.

In view of the above, Applicants respectfully submit that the Gorman and the Inoue references fail to teach or suggest each and every element of claim 1, and therefore, claim 1 is allowable over the cited prior art. Claim 8 is also allowable for the similar reasons discussed above regarding claim 1. Claims 4, 6, and 7 are dependent from claim 1, and therefore, also allowable. Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Claims 2-3 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gorman in view of Inoue as applied to claim 1 above, and further in view of Jamison (CRC Handbook of Lubrication and Tribology, 1994). Applicants respectfully traverse this rejection for the reasons discussed below.

Claims 2-3 and 5 are believed to be allowable for at least the reasons set forth above regarding claim 1. The Jamison reference fails to provide the teachings noted above as missing from the Gorman and the Inoue references. Since claims 2-3 and 5 are patentable at least by virtue of their dependency on claim 1, Applicants respectfully request that the rejection of claims 2-3 and 5 under 35 U.S.C. § 103(a) be withdrawn.

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gorman in view of U.S. Patent No. 3,240,233 ("Johnston") and further in view of U.S. Patent No. 6,086,970 ("Ren"). Applicants respectfully traverse this rejection for the reasons discussed below.

In the outstanding Office Action, the Examiner asserts:

it would have been obvious to a person of ordinary skill in the art at the time of the invention to form the inner plastic tubing layer of Gorman using lubricating particles suggested by Ren because it would provide an enhanced lubricity and collapse strength to a finished tubing of Gorman.⁷

However, it is respectfully submitted that the Examiner has failed to establish a *prima facie* case of obviousness because the above statement is merely conclusory and does not comprise an "*explicit rationale*" as required by *KSR Int'l*.

In addition, Applicants respectfully submit that the mere disclosure of a particulate additive composition of at least PTFE is insufficient to establish a

motivation to combine. In particular, Applicants note that the relevant inquiry is not whether the Ren reference discloses an additive composition, but rather whether one of ordinary skill in the art would *desire* to combine the Ren and the Inoue and Johnston references in order to arrive at the claimed invention. *See, e.g.*, MPEP 2143.01(III), which states “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination,” citing In re Mills.⁸ That is, establishing motivation requires the Examiner to demonstrate why one of ordinary skill in the art, absent the teachings of Applicants’ application, would want to replace the inner layer region of the Inoue and Johnston references with the inner layer region containing additive composition of the Ren reference. For instance, the Gorman reference teaches a lead tube for wire and a separate surrounding casing. The Johnston reference discloses lubricating the wire with a liquid lubricant, *viz.* the lubricant must be a liquid fluid in order to be able to apply it through the holes in the casing. The Ren reference discloses using a particulate matter, including PTFE, as an additive mixed with polymer, whereby the tube of the Ren reference has an even *consistency* over the cross section (which is inconsistent to the purpose of Inoue and Johnston, i.e., decrease accumulation of debris and fouling so as to prevent and/or reduce sticking of the wire on the guide). In addition, the Ren reference explicitly teaches that the lubricant is formed over the external surface of the tube (*see lines 6-7 of the Abstract*). Therefore, it would not have been obvious to apply the lubricant in the inner tube without destroying the teachings of the Ren reference. Thus, Applicants respectfully submit that the outstanding Office Action has failed to provide an objective teaching

⁷ See Office action mailed January 13, 2009, page 8, first full paragraph.

⁸ 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

that demonstrates why one of ordinary skill in the art would be motivated to modify and/or combine the teachings of the Fontirroche and the Ren references.

Further, Applicants respectfully submit that the Ren references explicitly *teach away* from the claimed subject matter. In particular, the claimed subject matter relates to a *filler wire guide tube for guiding a filler wire*. The filler wire is not clinically cleaned and debris may be detached from the wire material itself. Since the wire guide is supposed to feed thousands of meters of filler wire during its operation, plugging of the wire may occur. As such, the wire guide tube of the claimed subject matter is to decrease accumulation of debris and fouling so as to prevent and/or reduce sticking of the wire on the guide.⁹

In contrast, the Ren references teach a tube for a catheter used in the medical field, i.e., contamination or fouling is not a problem since the guide wire is pushed through the tube only limited times at short interval and in a sterile environment. That is, the guide tube in the claimed subject matter, for example, welding torch, is supposed to operate in an industrial environment and must be able to feed thousand of meters of filler wire without sticking due to fouling. Accordingly, one skilled in the art would not look to in the field of medical catheters to combine in the field of welding wire, and thus, Applicants respectfully submit that no *prima facie* case of obviousness has been established.

In view of the above, Applicants respectfully submit that the Inoue, the Johnston, and the Ren references fail to establish a proper *prima facie* case of obviousness, and therefore, claims 1 and 8 are allowable over the cited prior art. Claims 2-7 are dependent from claim 1 and, therefore, also allowable. Accordingly,

⁹ See instant disclosure, page 1, line 24 – page 2, line 13.

Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Entry of After Final Amendment

Entry of this amendment is proper under 37 CFR §1.116 since the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issues requiring further search and/or consideration since the amendments amplify issues previously discussed throughout prosecution; (c) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (d) place the application in better form for appeal, should an appeal be necessary. Entry of the Amendment is thus respectfully requested.

CONCLUSION

In view of the above remarks and amendments, Applicants respectfully submit that each of the pending objections and rejections has been addressed and overcome, placing the present application in condition for allowance. A notice to that effect is respectfully requested. Further, the above remarks demonstrate the failings of the outstanding rejections, and are sufficient to overcome the rejections. However, these remarks are not intended to, nor need they, comprehensively address each and every reason for the patentability of the claimed subject matter over the applied prior art. Accordingly, Applicants do not contend that the claims are patentable solely on the basis of the particular claim elements discussed above.

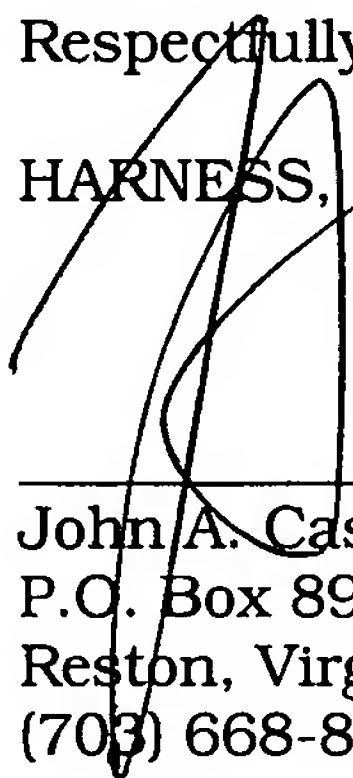
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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